Remarks

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. No claims are currently amended. Claims 1, 4-7, and 9-40 are pending.

Statement of Substance of Interview Dated 2/21/08

Applicant wishes to thank Examiner Amee A. Shah and Yogesh Garg for conducting a telephonic interview with Applicant's attorney, Daniel T. McGinnity, on 2/21/08.

During the interview, Applicant's attorney and the Examiner discussed the §103 rejections based upon the cited references Tremain, Bandhole, Hui, Nanja, and Banka. Claims 1, 18, and 36 were discussed. Applicant's attorney presented patentability arguments with respect to the claims as presently recited. The Examiner requested that the arguments be presented in writing for full consideration. The Examiner's noted the reference Henson (U.S. patent No. 6,167,383) for the first time. The Applicant refrains from comment on Henson until such time as the reference is formally applied against the present Application. No agreement was reached.

For at least the reasons discussed in the interview and discussed in detail herein, Applicant submits that all of the pending claims are in condition for allowance. If any issues remain that would prevent the allowance of the

application, Applicant requests that the Examiner contact the undersigned attorney to resolve the issues.

35 U.S.C. §103

Claims **1, 2, 4-7, 9-15, and 17** are rejected under 35 U.S.C. §103(a) as being unpatentable over Tremain, US 2002/0069369 ("Tremain") in view of Bandhole et al., US 2002/0171678 ("Bandhole") and in further view of Nanja, U.S. Patent No. 7,065,637 ("Nanja").

Claim **16** is rejected under 35 U.S.C. §103(a) as being unpatentable over Tremain in view of Bandhole in further in view Nanja and in further view of Hui, US 2003/0220983 ("Hui"). Applicant respectfully disagrees. For instance:

Claim **1** recites an apparatus for providing virtual computing services to subscribers on a subscription basis, said apparatus comprising:

- a server computer operable to:
- provide first computing services to a first subscriber of a plurality of subscribers enrolled in a subscription-based services program for the receipt of computing services;
- provide second computing services to a second subscriber of said plurality of subscribers enrolled in said subscription-based services program for the receipt of computing services; and
- output a user interface having one or more user selectable portions to enable subscriber selection of configuration options for respective computing services comprising at least:
    - selection of a virtual non-volatile storage capacity from at least two virtual non-volatile storage capacity configuration options; and
    - selection of an operating system from at least two operating system options, said server computer operable to install the selected operating system to a virtual non-volatile storage

having the selected storage capacity to provide respective computing services; and

- wherein said server computer comprises a first virtual non-volatile storage associated uniquely with said first subscriber to provide said first computing services and a second virtual non-volatile storage associated uniquely with said second subscriber to provide said second computing services, said first virtual non-volatile storage being configured according to a first selected virtual non-volatile storage capacity and a first selected operating system based upon configuration options selected by said first subscriber, and said second virtual non-volatile storage being configured according to a second selected virtual non-volatile storage capacity and a second selected operating system based upon configuration options selected by said second subscriber.

A *prima facie* case of obviousness has not been established with respect to claim 1. With respect to claim 1, the Office Action on p. 4 acknowledges that Tremain lacks numerous features of the claim in the following excerpt:

> Tremain does not teach the server computer outputting a user interface having one or more user selectable portions to enable subscriber selection of configuration options for respective computing services comprising at least a selection of virtual non-volatile storage capacity from at least two virtual non-volatile storage capacity configuration options, and a selection of an operating system from at least two operating system options, and the virtual non-volatile storages associated with each subscriber configured according to the option selected by the subscriber, said server computer operable to install the selected operating system to a virtual non-volatile storage having the selected storage capacity to provide respective computing services, wherein the first non-volatile storage is configured according to a first selected virtual non-volatile storage capacity and a first selected operating system based upon configuration options selected by said first subscriber, and the second virtual non-volatile storage configured according to second selected virtual non-volatile storage capacity and a second selected operating system based upon configuration options selected by said first subscriber.

Applicant agrees that Tremain fails to disclose, teach, or suggest the subject matter of claim 1. To correct these acknowledged defects in Tremain, the Examiner relies upon the combination of Bandhole with Nanja. However, the Examiner misinterprets these references and improperly combines them with Tremain. In particular, Examiner erroneously concludes that Bandhole/Nanja provide a basis for installing applications and/or an operating system responsive to selections made in a user interface on an allocated storage. Respectfully, this conclusion is not consistent with the disclosure of Bandhole/Nanja taken as a whole.

Bandhole in paragraph [0028], as indicated by the Examiner (Office Action p. 4.), references and relies upon Nanja as showing user interfaces for specifying the configuration of a computing environment. Thus, Applicant agrees that one of skill in the art would understand Bandhole to rely upon the disclosed user interface techniques of Nanja. The problem with the interpretation forwarded by the Examiner in rejecting claims 1 is that Nanja is explicitly and exclusively directed at allocating preconfigured devices/resources. Bandhole relies upon Nanja, as acknowledged by the Examiner. Even further, Bandhole itself contains explicit description that would lead one of skill in the art to conclude that Bandhole is directed to allocating preconfigured resources. This of course naturally follows from Bandhole's reliance on Nanja. Thus, since Bandhole/Nanja are directed exclusively to allocation of preconfigured devices/resources, there is no way Bandhole/Nanja may be combined with Tremain to correct the acknowledged

defects of Tremain. In the following discussion, the deficiencies of Bandhole/Nanja are addressed in detail.

Reference is made to particular portions of Bandhole and Nanja in support of the foregoing conclusions. To begin with the user interfaces of Nanja are to select preconfigured components from an inventory of available components, as the following excerpts from Nanja makes clear:

> FIG. 1 is a block diagram of <u>system 100 for allocating processing resources according to the present invention</u>. In FIG. 1, system 100 comprises, among other components customer/architect 101, a web-based interface 102, a computer network such as the Internet 108, configuration/access server system 103, the inventory of resources 105, the infrastructure server 104 for the maintenance of the inventory, and different levels of security 106 and 107. <u>In a first embodiment, customer 101 uses the web-based interface 102 and the Internet 108 to interact with server system 103 for the purpose of allocating resources, as described below.</u> The server 103 on receiving the information from the customer 101 <u>allocates resources based on the customer's requirements and the availability of resources in the inventory 105.</u> *Nanja, col. 5 lines 13-26.*

> Although not shown, one of ordinary skill in the art will realize that the "inventory" may include various machine and device types. For example, such devices may include mobile/laptop computers, embedded computing devices, hand-held computers, personal digital assistants, point-of-sale terminals and smart-card devices without limitation *Nanja, col. 5 lines 36-41.*

> <u>Web page 3 displays a list--by default--of configurations available. The user can select one of these options by selecting the menu items as shown in the screen shot for web page 4 of FIG. 6.</u> If the user is revisiting an environment that has already been configured, then the environment will also be displayed (not shown).

> Based on the selection made by the user, the configuration server 103 allocates a computer with the requested operating system and other application software. *Nanja, col. 6 lines 51-64.*

(emphasis added)

Thus, in accordance with the above excerpts from Nanja, a system for allocating existing and pre-configured computers is described. In particular, a web interface may list <u>available configurations</u>. When a user makes selections, "the configuration server 103 allocates a computer with the requested operating system and other application software". More particularly, the server 103 <u>allocates a computer from an inventory 105,</u> which might include various mobile/laptop computers, embedded computing devices, hand-held computers, personal digital assistants, point-of-sale terminals and smart-card devices.

Thus, Nanja is not consistent with the features of claim 1. More particularly, allocating a computer with the requested operating system is not the same as installing an operating system to the virtual non-volatile storage because allocating a computer simply means assigning a computer that already has the operating system installed. Nanja describes exclusively a system in which real computers are pre-configured and made available in an inventory. Then, when certain characteristics are selected via the user interfaces, a computer having the selected characteristics is allocated from the inventory. This is an entirely different approach than, for example:

(1) "output a user interface having one or more user selectable portions to enable subscriber selection of configuration options for respective computing services comprising at least: selection of a virtual non-volatile storage capacity from at least two virtual non-volatile storage capacity configuration options; and selection of an operating system from at least two operating system options, said server computer operable to install the selected operating system to a virtual non-volatile storage having the selected storage capacity to provide respective computing services";

(2) "first virtual non-volatile storage associated uniquely with said first subscriber to provide said first computing services and a second virtual non-volatile storage associated uniquely with said second subscriber to provide said second computing services"; and

(3) "first virtual non-volatile storage being configured according to a first selected virtual non-volatile storage capacity and a first selected operating system based upon configuration options selected by said first subscriber, and said second virtual non-volatile storage being configured according to a second selected virtual non-volatile storage capacity and a second selected operating system based upon configuration options selected by said second subscriber", as in claim 1 (emphasis added). Thus, Nanja does not correct the defects of Tremain acknowledged by the Examiner in the above excerpted portion of the Office Action.

Further as noted, Bandhole describes techniques similar to Nanja, even going as far as explicitly relying upon Nanja for the user interfaces used therein.

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Thus, one must conclude that Bandhole imports the pre-configuration techniques of Nanja. However, one does not need to speculate as to this point because this is exactly what Bandhole describes explicitly and clearly. For example, Bandhole states:

> In one embodiment of the present invention a system using the framework 342 is implemented for providing users with computing as a product. More specifically, in this embodiment a customer can choose specific components required for computing and the system will package the components to provide an environment that can be used for computing by the customer. For instance, the email customer may specify the preferred email software. <u>The system will choose a compatible operating system, a compatible client device running the operating system and the email software, acquire licenses, network connections etc.; the system will then package these resource to provide an email client product to the customer.</u> The customer pays for the product as a whole not separately for the hardware, software, or for the network connection. Also, the customer need not maintain any of the components and need only learn to access the email system as a whole. *Bandhole , paragraph [0051].* (emphasis added)

Again, it is evident from the above statement that a customer chooses available options and then the system chooses a preconfigured device having those options. For instance, if a preferred email software is desired then "a compatible operating system" is determined and "a compatible client device running the operating system and the email software" is selected from an inventory of available devices. However, Bandhole in view of Nanja does not disclose, teach, or suggest that the preferred email software is installed responsive to selection via the user interface.

The selection of a preconfigured device as in Bandhole/Nanja simply is not equivalent to the features recited in claim 1.

Based on a prior interview conducted in this case, the Examiner appears to place considerable weight on statements from Bandhole paragraph [0055] discussing configuration of a computing environment. Accordingly, Applicant will address paragraph [0055] which states;

> Once the customer has selected the components the computing environment can be configured in step 420. For instance, the user may specify that the Apache web server software has to run on Linux web servers; or that the web servers and application server(s) must be connected to the same network; or that two different networks must be connected to each other by a high bandwidth connection; or that a network must have a gateway to the Internet. Step 420 is optional because the system may present abstractions for pre-configured components. Each customer can save the environment configured as a new abstraction. This allows the system to present the new abstraction as a pre-configured component. For instance, a configuration of an Intel x86-compatible computer running a Windows 98 operating system and a WordPerfect word processing system may be presented as an "Easy Word Processing" component. If this configuration meets a customer's requirements then the customer need not do any further work. Of course, the customer may pick a pre-configured component and use it as part of another environment. This method of configuring, saving and presenting environment configurations saves time and effort for customers as well as providers. Environment can be used again and again without going through the configuration step. Commonly used environment configurations can be provided by service providers and used by large numbers of customers. *Bandhole, paragraph [0055]*.

Examiner, in contradiction to the express statements from Bandhole and Nanja discussed above, apparently interprets the statement "Once the customer has

selected the components the computing environment can be configured" to be a basis for the installation of desired and selected options on to a computer after it has been allocated to a user and responsive to the users selection of those option via a user interface. Applicant respectfully disagrees with this interpretation and asserts that the conclusion is not consistent with Bandhole/Nanja.

Respectfully the Examiner's interpretation is not supported by Bandhole/Nanja. While Applicant appreciates the Examiner's interpretation of this portion of Bandhole, Bandhole/Nanja taken as whole suggests a more compelling conclusion. Given that Bandhole and Nanja both appear to exclusively describe allocating of preconfigured resources, one of skill in the art would be compelled to reconcile paragraph [0055] of Bandhole with the rest of the disclosure, such as with paragraph [0051] and Nanja, rather than import an entirely new and contradictory meaning.

In this light, Applicant understands paragraph [0055] of Bandhole to use configuration in the sense of setting up or choosing of aspects for the described DCEs, which per Bandhole (particularly paragraph [0051]) are limited to packaging of pre-configured components for a specified system. Thus, in accordance with paragraph [0055] the user might, in addition to selecting available components, specify additional constraints for a preconfigured system which is to be allocated for use by the user. For example, specifying per paragraph [0055] that "the Apache web server software has to run on Linux web servers; or that the web servers and application server(s) must be connected to the same network".

Then, as explicitly stated in paragraph [0051], the system will take the specified DCE configuration (which might for example be specified via a user interface of Nanja) and find a compatible device (e.g., a pre-configured device), which already has the selected options. This is consistent with what Bandhole/Nanja actually describe and is what these references convey to those of skill in the art.

Moreover, paragraph [0055] itself suggests that a "customer may pick a pre-configured component and use it as part of another environment. This method of configuring, saving and presenting environment configurations saves time and effort for customers as well as providers. Environment can be used again and again without going through the configuration step. Commonly used environment configurations can be provided by service providers and used by large numbers of customers". Thus, what this portion of [0055] continues to describe is customer selection of a set of pre-configured components that may be packaged in a DCE. These DCE's may be used again and even used by large numbers of customers. But the DCE's are simply "abstractions for pre-configured components" and not allocated storage that is configured responsive to selection of additional constraints.

The configuration of the environment or DCE as used in [0055] would not be understood to mean that a user is able to install desired operating system applications and so forth to a device that has been allocated. There is nothing within Bandhole or Nanja, whether taken alone or in combination, which supports that interpretation. The proposed combination of Tremain with Bandhole/Nanja

consists of combining a subscription service with a system in which preconfigured computers are allocated to users. However, no matter how they are combined, the combination would still lack a virtual non-volatile storage allocated uniquely to a subscriber and configured responsive to user selections as is contemplated in claim 1. Thus, the combination of Bandhole/Nanja does not correct the acknowledged defects of Tremain.

For these reasons, the Office has failed to establish a *prima facie* case of obviousness with respect to claim 1. Accordingly, claim 1 is allowable and withdrawal of the §103 rejection is respectfully requested.

Claims 4-7, and 9-17 depend from claim 1 and are allowable at least on the basis of this dependency as well as for their own recited features, which the references of record fail to disclose, teach, or suggest. Accordingly, withdrawal of the §103 rejections of these claims is respectfully requested. More particularly:

Claim 13 recites the apparatus of claim 1, wherein:

- said server computer is further operable to establish a communication session with a subscriber device used by said first subscriber and to interact with said subscriber device during said communication session via another user interface, and
- wherein said server computer is further operable to receive data identifying the other user interface as preferred to be utilized by said subscriber device and to cause the display of the other user interface on said subscriber device.

In rejecting claim 13, the Office Action on p.7-8 indicates:

> Referring to claim 13. Tremain in view of Bandhole/Nanja also teaches the apparatus of
> Claim 1 wherein said server computer is further operable to establish a communication session
> with a subscriber device used by said first subscriber and to interact with said subscriber device
> during said communication session via another user interface, and wherein said server computer
> is further operable to receive data identifying the other user interface as preferred to be utilized
> by said subscriber device and to cause the display of the other user interface on said subscriber
> device (Tremain, Figs. 1 and 2, ¶¶0169-0171 and 0174).

5   Applicant notes that no particular rejection of claim 13 is offered. The rejection
simply amounts to claim language coupled with bare unexplained references to
Tremain. Accordingly, it is not clear what in particular the Examiner believes is
disclosed in the cited passages of Tremain, or what in particular the Examiner is
relying upon for the features of claim 13.

10   As the Examiner is aware, the Examiner "ordinarily should reject each
claim on all valid grounds available." *M.P.E.P. §707.07(g)* Further, "[w]here a
major technical rejection is proper, it should be stated with a full development of
reasons rather than by a mere conclusion coupled with some stereotyped
expression." *Id.* The Examiner's action should be complete as to all matters. *37*
15   *C.F.R. 1.104* and *M.P.E.P. §707.07(a)*. Failure to provide a full development of
the reasons removes any opportunity for the Applicant to rebut any reasoning used
by the Examiner in making the rejections. Therefore, full development of the

reasons or withdrawal of the rejection is requested. Further, absent full development of the reasons, finality of the next Office Action would be premature.

Further, Applicant submits that nothing in the cited portions of Tremain provides a basis for "to interact with said subscriber device during said communication session via another user interface" and "receive data identifying the other user interface as preferred to be utilized by said subscriber device and to cause the display of the other user interface on said subscriber device" as recited in claim 13. The cited portions appear to deal generally with network switches and firewalls and have nothing to do with the recited features. These recited features of claim 13 are simply lacking in Tremain. It is respectfully requested that the Examiner support the rejection with reasoning or indicate that claim 13 is allowable.

Respectfully, similar unsupported and unexplained citations to the references are made with respect to many claims, including claims 4-6, 9-15, and 17. The Examiner is respectfully requested to provide arguments and evidence as to the particular aspects of the references which are relied upon for the features of the claims. When rejections are based merely on assertions rather than arguments and evidence, the Applicant is deprived of a full and fair opportunity to rebut the reasoning used in making those rejections. Absent full development of the reasoning behind the rejections, Applicant submits the subject matter of claims 4-6, 9-15, and 17 is allowable.

As to **Claim 16,** claim 16 recites the apparatus of claim 4, wherein

- said server computer is further operable to replace said selected
  application computer software program of said first virtual non-volatile
  storage with a newer version of said selected application computer
  software program in accordance with a configuration option selected
  from the configuration options by said first subscriber.

In making the rejection of claim 16, the Office action p. 9-10 indicates:

> Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tremain in
> view of Bandhole/Nanja and further in view of Hui, US 2003/0220983 (hereafter referred to
> as "Hui").
>
> Referring to claim 16, Tremain in view of Bandhole/Nanja teaches the apparatus of
> Claim 4 as discussed above, but does not explicitly teach wherein said server computer is further
> operable to replace said selected application computer software program of said first virtual non-
> volatile storage with a newer version of said selected application computer software program in
> accordance with a configuration option selected from the configuration options by said first
> subscriber. Tremain and Bandhole/Nanja teach wherein the server is operable to update the
> computer software program in accordance with a configuration option selected by the subscriber
> (Tremain, ¶0141).
>
> Hui, in the same field of endeavor and/or pertaining to the same issue, discloses that it is
> old and well known in the art to periodically download newer versions of computer software
> programs (¶0005). Therefore, at the time of the invention, it would have been obvious to one of
> ordinary skill in the art to replace the computer software program during an update with a newer
> version so that customers can utilize the updated version and all the improvements therein,
> leading to greater customer satisfaction.

Applicant respectfully disagrees. Respectfully, paragraph [0005] of Hui (excerpted below) does not disclose, teach, or suggest "replace said selected application computer software program ... in accordance with a configuration option selected from the configuration options by said first subscriber" as in claim 16. Rather Hui describes an automatic download technique, per the following excerpt:

> In the automatic download technique, an application program may automatically search for updates or patches periodically by querying a specific Universal Resource Locator (URL) address over the network. This automatic download technique requires that the application access a predetermined site where updates are maintained and available for download. The application may then decide whether to download depending on the programs available at the download site and whether they are suitable for the application. *Hui, paragraph [0005]*.

Thus, Hui simply describes in general terms an automatic download technique. However, automatic download of updates is not sufficient to reject the features of claim 16. As presently recited, claim 16 contemplates "replace said selected application computer software program... **in accordance with a configuration option selected from the configuration options by said first subscriber**". The configuration options according to claim 1 are selected via "a user interface having one or more user selectable portions to enable subscriber selection of configuration options for respective computing services". Hui does not disclose, teach, or suggest application updating that occurs "in accordance with a

configuration option selected from the configuration options by said first subscriber". In fact, one would conclude from paragraph [0005] above only that a download is "automatic", which is not consistent with a "configuration option selected from the configuration options by said first subscriber". There is no basis for such a selection in relation to updates in Hui. Hui simply describes different techniques to obtain different results in a different way than the claimed features. Accordingly, claim 16 is allowable for at least these reasons.

35 U.S.C. §103

Claims 18-22, 29, and 36 are rejected under 35 U.S.C. §103(a) as being unpatentable over Banka et al., US 7,003,481 ("Banka") in view of Bandhole in further view of Nanja and in further view of Hui.

Claims 23-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Banka in view of Bandhole in further view of Nanja in further view of Hui and in further view of Tremain

Claims 27-28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Banka in view of Bandhole in further view of Nanja in further view of Hui in further view of Tremain and in further view of Forster, US 2004/0220980 ("Forster").

Claims 30-35 and 37-40 are rejected under 35 U.S.C. §103(a) as being unpatentable over Banka in view of Bandhole in further view of Nanja in further

view of Hui and in further view of Whitney, US 2003/0115442 ("Whitney"). For

at least the following reasons, the Applicant respectfully disagrees. For example:

Claim 18 recites a method for providing subscription-based virtual

computing services to a subscriber, the method comprising the steps of:

- enrolling a subscriber in a subscription-based computing services program for the provision of virtual computing services to the subscriber under the subscription-based computing services program through a virtual non-volatile storage allocated uniquely to the subscriber and accessible to the subscriber via a server computer during a communication session between the server computer and a subscriber device used by the subscriber, the virtual computing services corresponding to configuration options selectable by the subscriber;
- exposing a user interface having a plurality of portions selectable by the subscriber to specify the configuration options for the virtual computing services including a least:
    - a portion selectable to specify a storage capacity of the virtual non-volatile storage from at least two storage capacity options;
    - a portion selectable to specify an operating system from at least two operating system options, said server computer operable to install a selected operating system to the virtual non-volatile storage to provide the virtual computing services; and
    - a portion selectable to specify whether the server computer is to automatically install available updates to the selected operating system;
- enabling access to and use of the virtual non-volatile storage as desired by the subscriber via a server computer during a communication session between the server computer and the subscriber device; and,
- charging the subscriber in accordance with selected configuration options received from the subscriber.

Claim 36 recites a computer-readable medium having computer-executable instructions for providing subscription-based virtual computing services to a subscriber, the computer-executable instructions for performing steps comprising:

- enrolling a subscriber for the provision of virtual computing services to said subscriber through a virtual non-volatile storage allocated uniquely to said subscriber and accessible to said subscriber via a server computer during a first communication session between said server computer and a subscriber device used by said subscriber, said virtual computing services corresponding to configuration options selectable by said subscriber;
- exposing a user interface having a plurality of portions selectable by the subscriber to specify the configuration options for the virtual computing services including a least:
    - a portion selectable to specify a storage capacity of the virtual non-volatile storage from at least two storage capacity options,
    - a portion selectable to specify an operating system from at least two operating system options, said server computer operable to install a selected operating system to the virtual non-volatile storage having the selected storage capacity to provide the virtual computing services;
    - a portion selectable to specify whether the server computer is to automatically install available updates to the selected operating system; and
    - a portion selectable to specify when the server computer is to perform backups of the virtual non-volatile storage;
- enabling access to and use of said virtual non-volatile storage as desired by said subscriber via said server computer during a subsequent communication session between said server computer and a subscriber device used by said subscriber; and,
- charging said subscriber a subscription fee in an amount related to selected configuration options received from said subscriber subscriber.

In making out the rejection of claims 18 and 36, the Examiner asserts that Banka describes the overall structure of claims 18 and 36, mainly relying upon

Banka as providing computing services to a user through the use of that user's specific virtual non-volatile storage space. For instance, the Office Action on p. 10-11 states:

> Referring to claim 18, Banka discloses a method for providing subscription-based virtual computing services to a subscriber, the method comprising the steps of:
>
> • enrolling a subscriber in a subscription-based computing services program for the provision of virtual computing services to the subscriber under the subscription-based computing services program through a virtual non-volatile storage allocated uniquely to the subscriber and accessible to the subscriber via a server computer during a communication session between the server computer and a subscriber device used by the subscriber, the virtual computing services corresponding to configuration options selectable by the subscriber (col. 5, lines 47-67 — note the enrollment occurs when the customer enters into a contract);

Respectfully, the reliance on Banka per the excerpted portion of the Office Action on p. 10-11 is misplaced. For example, the portion of Banka relied upon states:

> Provisioning
>
> In accordance with one aspect of the invention, a Subscriber enters into an electronic service Contract ("Contract") with a Provider to access (perhaps through lease or purchase) one or more applications and/or services hosted by the Provider. Each Contract between the Subscriber and the Provider (e.g. by way of one or more PARs) represents a particular presentation method for an application to be accessed by the Subscriber. That is, each Contract essentially represents a roadmap for providing a particular presentation service (e.g. application) to a subscriber, and may contain such items as payment terms, the number and nature of remote applications to be made accessible to the Subscriber, the number of licenses to be granted for each remote application, the number

of virtual private network connections and/or tunnels to be provisioned between the Subscriber and the Provider, network security requirements of the application, client binary file distribution location and platform information, the bandwidth to be reserved for use by the Subscriber in accessing the remote applications, preferred performance and Quality of Service (QOS) levels, and so forth. *Banka, col. 5 lines 45-67.* (emphasis added)

Applicant acknowledges that this portion of Banka does describe a subscriber entering into a contract to access applications and or services hosted by a provider. In essence, what Banka describes is a subscription service. However, using network resources hosted by a provider on a subscription basis is not sufficient to reject the features of claims 18 and 36.

The Examiner is respectfully requested to discuss in detail what relation the above excerpted portion of Banka has to **"a virtual non-volatile storage allocated uniquely to said subscriber and accessible to said subscriber via a server computer during a first communication session"** as in claim 18. Applicant submits that this feature is entirely lacking in the Banka reference. Further, it appears that Banka makes no mention of unique allocation of the applications and services to particular subscribers. Rather, Banka describes subscribers entering into a contract to access resources which are commonly available to every subscriber. For instance, FIG. 2 of Banka clearly shows client 202 and 204 being provided common access to resources, such as servers 214 and 216, as is described in the following excerpt:

> In accordance with the teachings of the present invention, client 202 and/or client 204 access one or more applications from one or more Provider presentation servers (e.g. 214 and 216) via transport 210 in cooperation with the SAR and the PAR. In accordance with one embodiment of the invention, Subscriber authentication authority 208 authorizes client 202 and/or client 204 prior to client 202 and/or client 204 accessing the Provider's application. That is, client 202 and/or client 204 can access the Provider's applications without the need for the Provider to necessarily maintain its own authentication database for each application. *Banka, col. 4 lines 9-15.* (emphasis added)

Thus, Banka is limited to providing a subscription service and authentication to access a variety of network resources that are commonly available to a plurality of users. Respectfully, it is not clear how the Examiner arrives at the features of claims 18 and 36 from the subscription techniques that are described in Banka. Banka fails to mention any type of storage being allocated to different subscribers or clients, and certainly does not disclose, teach, or suggest subscribers being able to configure such storage. Thus, Banka is not consistent with "a virtual non-volatile storage allocated uniquely to said subscriber".

Banka (as is clear from the above excerpted portions) describes a system where customers are allowed to <u>use</u> applications and services provided by a provider, and is completely devoid of any type of storage specific to a user, on which an operating system and any other application desired by a user may be installed. Banka simply describes different subject matter, which uses different

techniques, to achieve different results than claims 18 and 36 as presently recited. Claims 18 and 36 are allowable for at least this reason.

Further, The Examiner acknowledges deficiencies in Banka in addition to those discussed above. In particular, the Office Action on p. 11 states:

> Banka does not disclose the configuration options comprising at least a virtual non-volatile storage capacity from at least tow storage capacity options, an operating system from at least two operating systems, said server computer operable to install a selected operating system to the virtual non-volatile storage to provide the virtual computing services, and whether the server computer is to automatically install available updates to the selected operating system.

To correct these acknowledged defects in Banka, the Examiner again relies upon the combination of Bandhole with Nanja. However, the Examiner misinterprets these references and improperly combines them with Banka. In particular, Examiner erroneously concludes that Bandhole/Nanja provide a basis for installing applications and/or an operating system responsive to selections made in a user interface on an allocated storage. Respectfully, this conclusion is not consistent with the disclosure of Bandhole/Nanja taken as a whole. The arguments made with respect to Bandhole/Nanja in relation to claim 1 are also applicable to claims 18 and 36. The arguments set forth above with respect to Bandhole/Nanja are referenced with respect to claims 18 and 36 to avoid further burdening of the record. As discussed with respect to claim 1, Bandhole/Nanja is

limited to the selection of preconfigured devices, which is simply not equivalent to the features recited in claims 18 and 36.

For at least the reasons already discussed, Bandhole/Nanja is not consistent with the features of claims 18 and 36. More particularly, allocating a computer with the requested operating system is not the same as installing an operating system to the virtual non-volatile storage because allocating a computer simply means assigning a computer that already has the operating system installed. Bandhole/Nanja exclusively describes a system in which real computers are pre-configured and made available in an inventory. Then, when certain characteristics are selected via the user interfaces, a computer having the selected characteristics is allocated from the inventory. This is an entirely different approach than, for example:

(1) "a virtual non-volatile storage allocated uniquely to the subscriber"; and

(2) "a user interface having a plurality of portions selectable by the subscriber to specify the configuration options for the virtual computing services including a least a portion selectable to specify an operating system from at least two operating system options, said server computer operable to install a selected operating system to the virtual non-volatile storage to provide the virtual computing services; a portion selectable to specify whether the server computer is to automatically install available updates to the selected operating system", as in claim 18. Claim 36 incorporates similar features in varying terms and scope.

There is nothing within Bandhole or Nanja, whether taken alone or in combination, which supports a conclusion that virtual non-volatile storage is uniquely allocated to a user and then configured with selected options from a user interface. The proposed combination of Banka with Bandhole/Nanja consists of

5 combining a subscription service with a system in which preconfigured computers are allocated to users. However, no matter how they are combined, the combination would still the lack a virtual non-volatile storage allocated uniquely to a subscriber and configured responsive to user selections as is contemplated in claims 18 and 36. Thus, the combination of Bandhole/Nanja does not correct the

10 acknowledged defects of Banka.

Further, the references of record fail to disclose, teach, or suggest, "enabling access to and use of the virtual non-volatile storage as desired by the subscriber via the server computer during a communication session between the server computer and the subscriber device." That is, a customer is provided the

15 freedom to do whatever is desired with their allocated virtual memory, similar to using their own local hard drive.

Banka deals with as subscription service and thus fails to even disclose an allocated storage. Accordingly, Banka does not provide "access to and use of the virtual non-volatile storage". Further, it is should now be apparent that

20 Bandhole/Nanja are directed to a system that relies upon pre-configured real resources that may be allocated based on selections from a user interface. However, nothing in Bandhole/Nanja suggests "enabling access to and use of the

virtual non-volatile storage as desired by the subscriber via the server computer during a communication session between the server computer and the subscriber device". In contrast, Bandhole/Nanja set up a DCE and allocate corresponding pre-configured resources to match the DCE. While a user may specify and manage a DCE, they do not have access to the underlying resources/devices allocated based in the DCE (see Bandhole paragraph [0036]; "As used herein, the term "virtual" specifies that neither the requisite devices nor the network need to be physically accessible to users."). Thus, the techniques of Bandhole/Nanja do not provide the above recited features of claims 18 and 36.

Still further, the rejections of claims 18 and 36 suffer from the same deficiencies in the reliance upon Hui as was discussed above with respect to the rejection of claim 16. Hui simply describes an automatic download technique, which does not meet the recited features, such as "a portion selectable to specify whether the server computer is to automatically install available updates to the selected operating system" as in claim 18, or "a portion selectable to specify whether the server computer is to automatically install available updates to the selected operating system; and a portion selectable to specify when the server computer is to perform backups of the virtual non-volatile storage" as recited in claim 36. The arguments above with respect to Hui are referenced with respect to claims 18 and 36 to avoid further burdening of the record.

Moreover, motivation for the proposed combination is lacking at least because the references *teach away* from the combination and/or the proposed

modification impermissibly changes the principles of operation of the references. For example, Banka is directed at a subscription service in which subscribers register for and/or are authenticated to commonly available resources. Further, Bandhole/Nanja are directed to allocating pre-configured resources from an inventory of available resources. These references simply are inconsistent with "a virtual non-volatile storage allocated uniquely to the subscriber and accessible to the subscriber via a server computer during a communication session between the server computer and a subscriber device used by the subscriber, the virtual computing services corresponding to configuration options selectable by the subscriber". The proposed combination would require impermissible modifications to the references. For instance, rather than using commonly available resources as exclusively described, Banka would be altered to uniquely assign storage. Similarly Bandhole and/or Nanja must be altered to deviate from the explicitly described techniques in which pre-configured resources are allocated from an inventory of available resources. Such changes to principles upon which a reference operates are not permitted under §103. Thus, in addition to the defects in the proposed combination discussed above, motivation for the proposed combination is lacking for at least these reasons.

Claims 18 and 36 are allowable for at least the foregoing reasons and withdrawal of the §103 rejections is respectfully requested.

Claims 19-35 depend from claim 18 and are allowable at least on the basis of this dependency as well as for their own recited features, which the references

of record fail to disclose, teach, or suggest. Accordingly, withdrawal of the §103 rejections of these claims is respectfully requested.

Claims 37-40 depend from claim 36 and are allowable at least on the basis of this dependency as well as for their own recited features, which the references of record fail to disclose, teach, or suggest. Accordingly, withdrawal of the §103 rejections of these claims is respectfully requested.

Conclusion

The Application is in condition for allowance and the Applicant respectfully requests reconsideration and issuance of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is requested to contact the undersigned attorney to discuss the unresolved issue.

                                        Respectfully submitted,

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